

Appl. No. 10/560,065
Amdt. Dated November 20, 2009
Reply to Office Action of August 20, 2009

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A particle comprising a core of the metallic element tungsten optionally together with other metallic elements wherein the core of the particle has a tungsten content of 20 to 100 weight% of metallic tungsten and wherein said core is coated with a charged coating layer to passivate the reactive surface of the tungsten particle, said coating layer comprising a polymeric layer formed from acrylic acid monomers.
2. (Previously presented) A particle as claimed in claim 1 wherein the diameter is in the range of about 1.5 to about 20 nm.
3. (Previously presented) A particle as claimed in claim 1 wherein the diameter is in the range of 1.5 to 15 nm.
4. (Previously presented) A particle as claimed in claim 1 wherein the diameter is in the range of 1.5 to 7 nm.
5. (Previously presented) A particle as claimed in claim 1 wherein the diameter is in the range of 2 to 6 nm.
6. (Cancelled)
7. (Previously presented) A particle as claimed in claim 1 wherein the core of the particle has a tungsten content of 50 to 100 weight % of metallic tungsten.

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8. (Previously presented) A particle as claimed in claim 1 wherein the core of the particle has a tungsten content of 85 to 100 weight % of metallic tungsten.
9. (Previously presented) A particle as claimed in claim 1 wherein the core of the particle has a tungsten content of 95 to 100 weight % of metallic tungsten.
10. (Previously presented) A particle as claimed in claim 1 wherein the core of the particles has a tungsten content of about 100 weight % of metallic tungsten.
11. (Previously presented) A particle as claimed in claim 1 wherein the core of the particle comprises metallic tungsten and one or more of the elements rhenium, iridium, niobium, tantalum or molybdenum in their metallic form.
12. (Cancelled)
13. (Currently Amended) A particle as claimed in claim 1-12 wherein the charged coating layer provides a net positive or negative charge at the pH of the environment where the particle is administered.
14. (Currently Amended) A particle as claimed in claim 1-12 wherein the charged coating layer provides a negative charge at the pH of the environment where the particle is administered.
15. (Currently Amended) A particle as claimed in claim 1-12 wherein the charged coating layer provides the net negative charge of acidic groups such as carboxylic acid groups, sulphonic acid groups, phosphoric acid groups and acidic heterocyclic groups.
16. (Currently Amended) A particle as claimed in claim 1-12 wherein the charged coating layer provides the net positive charge of basic amino, amidine, guanidine, quaternary ammonium and phosphonium groups.

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17. (Currently Amended) A particle as claimed in claim 1 ~~12~~ wherein the charged coating layer comprises up to 50 charges per particle.
18. (Currently Amended) A particle as claimed in claim 1 ~~12~~ wherein the charged coating layer comprises up to 40 charges per particle.
19. (Currently Amended) A pharmaceutical as claimed in claim 1 ~~12~~ wherein the charged coating layer comprises up to 25 charges per particle.
20. (Currently Amended) A particle as claimed in claim 1 ~~12~~ wherein the charged coating layer comprises at least 8 charges per particle.
21. (Currently Amended) A particle as claimed in claim 1 ~~12~~ wherein the charged coating layer comprises at least 4 charges per particle.
22. (Cancelled)
23. (Currently Amended) A particle as claimed in claim 1 ~~22~~ wherein the polymeric layer comprises a hydrophilic polymer.
24. (Currently Amended) A particle as claimed in claim 1 ~~22~~ wherein the polymeric layer comprises a homopolymer.
25. (Currently Amended) A particle as claimed in claim 1 ~~22~~ wherein the polymeric layer comprises a copolymer.
26. (Cancelled)

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27. (Currently Amended) A particle as claimed in claim 1 ~~22~~ wherein the polymeric layer is formed from at least one monomer containing a charged group.
28. (Currently Amended) A particle as claimed in claim 1 ~~22~~ wherein the polymeric layer is formed from at least one neutral monomer.
29. (Currently Amended) A particle as claimed in claim 1 ~~22~~ wherein the molar ratio between the neutral monomer and the charged monomer is below 20:1.
30. (Currently Amended) A particle as claimed in claim 25 ~~29~~ wherein the molar ratio between the neutral monomer and the charged monomer is between 10:1 and 10:1.5.
- 31-38. (Cancelled)
39. (Previously presented) A pharmaceutical comprising particles of claim 1 optionally together with a pharmaceutically acceptable solvent or excipient.
40. (Previously presented) A diagnostic agent comprising particle as claimed in claim 1 optionally together with a solvent or excipient.
41. (Previously presented) An X-ray contrast agent comprising a particle as claimed in claim 1 optionally together with a solvent or excipient.
42. (Previously presented) A particle as claimed in claim 1 wherein the particle comprises in vivo contrast agents.
43. (Previously presented) A particle as claimed in claim 1 wherein the particle comprises X-ray contrast agents.

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44. (Previously presented) A method of diagnosis comprising administration of particles of claim 1 to a human or animal body, examining the body with a diagnostic device and compiling data from the examination.
45. (Previously presented) A method of imaging, specifically X-ray imaging comprising administration of particles of claim 1 to a human or animal body, imaging the body with an imaging device, compiling data from the examination and optionally analysing the data.
46. (Previously presented) A process for the preparation of particles of claim 1 comprising decomposing a source of tungsten (0) in a high boiling, dried and deoxygenated solvent in the presence of one or more monomers and thereby effecting a thermally induced polymerization of the monomers.
47. (Currently Amended) A process as claimed in claim 34 46 wherein the source of tungsten (0) is tungsten hexacarbonyl (W(CO)₆).
48. (Currently Amended) A process as claimed in claim 34 46 wherein the solvent comprises di- and triglyme, diphenyl ether, trialkyl phosphine oxide and trialkyl phosphine.
49. (Currently Amended) A process as claimed in claim 34 46 wherein the solvent comprises trioctyl phosphine oxide and triaoctyl phosphine.
50. (Currently Amended) A process as claimed in claim 34 46 wherein the high boiling, dried and deoxygenated solvent further comprises a fraction of a lower boiling solvent.
51. (Currently Amended) A process as claimed in claim 38 50 wherein the fraction of a lower boiling solvent comprises between 5 to 15 volume% of cyclooctane and/or n-heptane.
52. (Currently Amended) A process as claimed in claim 34 46 further comprising work – up of the formed particles from a low-boiling alkane, specifically from pentane.

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53. (Currently Amended) A process as claimed in claim 34 46 wherein one or more of the monomers comprises silylether-protected polar groups and where the protecting groups are cleaved off in aqueous solution to yield hydrophilic polymer coated particles.

54-61. (Cancelled)